JAYPEE UNIVERSITY OF INFORMATRION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- Apr 2016
B.Tech(CSE) IV Semester

COURSE CODE: 10B11CI401   MAX. MARKS: 25

COURSE NAME: Microprocessors and Controllers

COURSE CREDITS: 4   MAX. TIME: 90Min

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q.1. [5 Marks. Each question is half mark]
- a) List key issues in the interfacing of IO devices.
- b) List program memory addressing modes for 8086?
- c) Differentiate between microprocessor and microcontroller.
- d) What is a schmitt trigger?
- e) Explain bank selection in 8051.
- f) What is indexed addressing mode in 8051?
- g) List different types of memory components.
- h) What is aligned access?
- i) Differentiate between memory mapped and isolated IO addressing.
- j) List steps in the design of an address decoder.

Q.2. [5 marks] Design memory interface for 8086 for 1Mbyte memory using 64Kbyte memory chips and separate write strobe bank selection.

Q.3. [5 marks] Explain the register architecture of 8051 microcontroller.

Q.4. [5 marks] Design hardware and software interfacing of an 8 bit electromechanical switch and 8 LEDs to show the status of the switches.

Q.5. [5 marks] Describe IO interface 8255PPI. Interface a 6 digit seven segment LED display to 8086 using 8255PPI .